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ABSTRACT

The report contains eight conference presentations made by professional vocational-technical educators as they considered decisions necessary to occupational education program development in a period of rapidly changing times. The speakers' topics were related to decisions concerned with changes in society, competency based teacher education, new certification patterns for teachers, legislation at State and national levels, career education, national manpower and employment policies, vocational education for women, leadership development through the Education Profession Development Act (E.P.D.A.), and the implications of the energy crisis for vocational education. Appended are the conference program, a list of vocational-technical education faculty, graduate association members and graduate students at the University of Tennessee (Knoxville), and names and addresses of the program and conference participants. (Author/MS)

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DECISIONS AHEAD FOR VOCATIONAL-TECHNICAL EDUCATION

Conference Proceedings

A conference for Graduate Students,
Teacher Educators, and Supervisors

April 15 and 16, 1974

Carolyn Brown Memorial University Center
The University of Tennessee
Knoxville, Tennessee

Edited By
Anthony G. Porreca

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Foreword

This report of the "New Decisions Conference" for Vocational-Technical Education is published with the hope that it will serve as a review for those who attended and that, for a wider audience, it will reflect some of the thinking of an important cross section of professional vocational-technical educators as they considered decisions necessary to program development in a period of rapidly changing times. The Vocational-Technical Education Department at the University of Tennessee is pleased to publish and disseminate this report.

Those who planned this conference recognized the importance of new decisions and new problems in occupational education. These decisions were concerned with career education, competency based teacher education, new certification patterns for teachers, and legislation at state and national levels. There was an awareness of decisions concerned with national manpower and employment policies, vocational education for women, and implications of the energy crisis for vocational education.

Since the 18 universities were involved in the Education Professions Fellowship program, which had as its objective the development of leadership for vocational-technical education, the concerns of these institutions were considered in planning the conference.

The major contributors to the conference were selected carefully and were asked to prepare a hard-hitting presentation. Each of these persons made outstanding presentations including ideas, concepts, and developments relating to the theme "Decisions Ahead for Vocational-Technical Education." Following each presentation, fifteen small groups considered the process of decision making as it centered on the concepts developed by the speakers.

The University of Tennessee was pleased at the response to the conference. One hundred and fifty-two persons from thirteen different states participated. The Vocational-Technical Graduate Student Association of The University of Tennessee played a leading part in planning the conference and in taking charge of the various sessions, including the small group sessions. The conference report was edited by Dr. Tony Porreca, who is also advisor to the graduate student organization.

The Department wishes to thank all those who participated. We hope that this report will serve a useful purpose in summarizing the accomplishments of a hard-working group who came to grips with some important contemporary problems.

Ralph J. Woodin
Chairman, Department of
Vocational-Technical Education

Acknowledgments

Sincere appreciation is extended to all those persons who, through their cooperation, interest, and participation, made this Conference very worthwhile.

Without the full orchestration of work effort by the Vocational-Technical Education faculty and graduate students, the planning and successful implementation of the Conference would not have been a reality. In particular, with the leadership of Sam Whittaker, President of the Vocational-Technical Education Graduate Student Association, the graduate students demonstrated a sincere and wholesome effort which was consistent with the enthusiastic spirit of their daily academic activities.

Editor

Table of Contents

Page

FOREWORD iii

ACKNOWLEDGMENTS iv

PRESENTATIONS

Keith Goldhammer
New Decisions for a Changing World 1

Carl J. Dolce
Decisions Ahead in Teacher Education 7

George Wallrodt
Legislative Decisions Which Must Be Made 15

Delivered by Duane M. Nielsen; prepared by Kenneth B. Hoyt and Duane M. Nielsen
Decisions Ahead in Career Education 19

Jacob J. Kaufman
Decisions Regarding Manpower and Employment 27

Mary L. Ellis
Decisions on Vocational Education for Women 33

Frank L. Perazzoli
Developing Decision-Makers Through E.P.D.A. 38

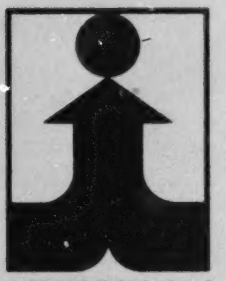
Lloyd J. Phipps
The Energy Crisis and Vocational-Technical Education Decisions 45

APPENDICES

Appendix A
Conference Program 51

Appendix B
Department of Vocational-Technical Education Faculty, Vocational-Technical Graduate Association, Vocational-Technical Graduate Students 55

Appendix C
Program Participants, Conference Participants 58



NEW DECISIONS FOR A CHANGING WORLD

Keith Goldhammer

Dean, College of Education
Michigan State University

Introduction

Change doesn't just happen. Change is the result of the decisions we make and of the values upon which we make those decisions. When we say we are a part of the changing world, we fundamentally mean that we are making decisions and that we are trying to see that there are certain values which will predominate in the world. I can't tell you what changes are going to take place. I don't know how to predict if the alternatives that lie before us are the alternatives that we will decide to accept. Even more confusing than that is the fact that we live in an age where our value structures are terribly fragmented and what many thought were great, enduring values are, possibly, no longer generally accepted. We don't know what values will guide our future decisions.

I hope that in our decisions we keep in mind that every little decision has a cumulative effect and ramifications for the big decisions that will affect us in our

society; and I hope that we will give considerable attention to the fact that, in reality, in making those decisions and deciding between alternatives, we are actually deciding upon the consequences which we would prefer to prevail. Our decisions, inevitably, will be related to the larger questions of what kind of world we can have and what kind of a world we should have. Those are two very different aspects of the parameters of these decisions because there are a limited number of decisions that can be made, given the nature of the world, the finite resources, and the finite capabilities that exist within it.

The two parts to my speech are going to be (1) the areas in which I think changes in our society are occurring which affect the decisions we must make and (2) some issues in vocational education which, hopefully, we can resolve. Let's look at some of the areas that impinge upon us as vocational educators and where I think pressures are going to rise.

Changes in Society

First of all, there is the whole area of lifestyles. Probably the most impressive thing about the age in which we live is that we have made some of the good things of our society accessible to people who have been denied that accessibility in previous ages.

We say we have an energy crisis, and certainly that energy crisis has an impact on our society. The energy crisis is not entirely the result of a shortage of fuel or a shortage of energy. Basically, it has happened because all of our forecasts were made upon the assumption that there were large segments of our society who did not have access to some of the good things our society has to afford; and thanks primarily to the effectiveness of the public school system, that pattern has been changed.

We have changed our lifestyle and will have to change it further as the result of environmental contamination. We are changing our lifestyle because we are changing some of the conditions under which we live on this earth.

The second area of concern for vocational education, I think, is the nature of work. We don't really know how to define work anymore. It has now become an ambiguous term which is difficult to define. I had the pleasure during this past week of working with an executive of a large computer corporation. He says his company is going to revolutionize the computer business with a computer that is going to be manufactured almost 100 percent by automation. Our technical skills will enable us to eliminate different kinds of jobs and different kinds of skills. We will probably see the relationship between productive service and professional occupations change drastically within the years ahead. We will have a different perspective of the problem of work and training and the interrelationship between the two during different periods of our lives. We will have to look upon work in terms of both paid-for work and volunteered work in order to maintain our society. We now must reexamine the whole realm of the nature of work and ask questions about the nature of training for the job. Will we emphasize on-the-job training? Will most jobs necessitate prolonged preparation? Will our productive system enable an individual to pass through various job ladders as he goes into more exacting, more highly responsible kinds of employment? Will we have to find creative ways of using the entire work force of the

United States, or of any society, in an age where some types of jobs are disappearing very rapidly? We may tell individuals that their life patterns may be like the Biblical story of seven years of plenty and the seven years of famine. Perhaps the work cycle will be seven years of productive enterprise and three years of retraining where everyone will have to take leave with full pay in order to maintain skills and have some productive enterprises in which to engage. We may have ten-year-or-less cycles of education and recurrent education to keep all people involved and current in their productive capabilities.

Leisure and Recreation

A problem of leisure and recreation exists which we have not generally associated with vocational endeavors within our society. What are the problems of recreation in our society today? For instance, if we lose our mobility, where will the centers of recreational activities be? Can we define what we mean by these particular types of activities? Are they relief from boredom? A personal need which work fails to satisfy? Social participation as a means by which one can identify with larger social issues and larger social purposes? The problem may be associated with population movement, a receding birth rate, a rising average age of the population, and a growing number of individuals who are superannuated. I recently read an article in the *New York Times* which forecasts the possibility of having a larger percentage of our population superannuated than will be in productive enterprises. What will this mean for maintaining the mental health and the viability of our society? Some people have said that we no longer live in a technological revolution; rather, it is a post-technological age. Call it what you want. Technological changes are still occurring. Individuals may have to retire earlier, and younger workers may have more time for leisure activities, which, hopefully, will be re-creative and constructive.

Technology

Technology is changing not only the way we work but also the way we live. It is also changing the nature of the resources which we have available and how we use these resources. One of the great questions is how much resources will be available in the traditional mode of employment? We think in terms of that to which we have become accustomed, and we say, "This is the way to do it!" I am leading a seminar tonight on the impact of science in this generation. The first question before my seminar is: "Is there a real shortage of energy in the universe?" And you all know the answer: there is no shortage of energy. Everything is energy. There is a shortage in our *capability* to use that source of energy efficiently and economically.

Some months ago, I read a story of the man who found a black liquid on his farm in Pennsylvania and thought that a great tragedy had struck him, that his land was going to be useless, and that he would be turned into bankruptcy. You might have a little well of sour water on your place that may turn you into a millionaire.

Stereotypes

Probably one of the two greatest things that has happened to our age is that we are now accepting minorities as full-fledged citizens, and we are accepting women as human beings. I don't think we fully appreciate what has happened. We are changing a lot of stereotypes. If women are to have an opportunity to gain their fulfillment as professional and skilled persons, along with their right to have a family life, men will have to learn to care for children. Men will have to share in the chores in the home and take some courses in homemaking so that both parents will have the skills necessary to maintain the household, to be decent parents and decent spouses.

We also have to deal with the area of worker power. We conduct most of our educational programs, and particularly in the area of vocational education, as though trade unionism was not as yet a fact of life, which it truly is. Not only that, it is a growing fact of life. Incidentally, the American trade union movement and the direction that it took was perhaps the thing that saved the economy of the United States. You may ask if that was bad or good. I happen to think that it was good. We were on the verge of destroying our system of enterprise at the point when we developed a trade union movement that said, "If you plug us into the good things of life, we will protect this system because we have an economic stake within it." We can no longer treat employees as though they are hired-hands or as though they are temporary participants in the enterprise.

Workers need to be involved in areas of determining levels of job security, productive characteristics, welfare provisions as well as things that affect the conditions of entry into employment and the nature of the training programs they are going to receive.

Learning

Before presenting some issues we must face in vocational education, I would like to present a concept of learning which is significant for the resolution of those issues. We cannot provide a truly developmental vocational education program without a relevant theory of learning, and I think that theory will have to encompass three factors.

One factor of learning is what I call *discipline*. By discipline, I mean the process of being able to utilize one's entire psychological, physical, spiritual essences effectively for being able to achieve one's purposes in life. A human being is a bundle of potentialities. Learning is, in part, a means for turning one's potentialities into capabilities.

The second ingredient of learning is what I call *control*. Every individual is surrounded by a number of environments which are social, physical, psychological, aesthetic, and spiritual. By control I mean that an individual has to acquire the ability to cope with these environments and to use them in order to achieve his aspirations within them. If I can't cope with people and things in my environment, I will be neither a fulfilled nor a very successful human being. Knowing how to deal with things and processes as participants in a society is learning.

Last of all, learning involves *meaning*. By meaning I refer to being able to use

what I am in relationship to the environments in which I am a part—with some ideals, with values which are socially constructive, with values which help to build a strong social body, with values which enable me to interpret the differences between right and wrong, good and bad, the beautiful and the true, and so forth. Without those meanings, life becomes merely that of operating as an automaton.

For the moment please accept this conception as we look at some problems in vocational education.

Issues in Vocational Education

(1) Whether we as educators like it or not, we will have to confront those people who say vocational education is obsolete. Some educators and scholars have maintained that the only thing schools are good for is cognitive development. Learning is equated solely with knowing! There is very little part of our life that's cognitive by this definition. The person who fragments the human being into the cognitive, the affective, and the psychomotor is unrealistically cutting the human being apart. That is not what a human being is. A human being is all of those things and more wrapped into one. Their conception, however, has led to the argument that manual skills have no place in the school, which is basically an intellectual enterprise.

The rate that vocational education has adapted to the changing needs of our society may give strength to the argument that vocational education is obsolete. We still maintain, throughout this country, a discrete, unitary occupational goal for most of our vocational courses. If you want to see our most dismal performance, look at the situation in the junior high schools. We have relatively few beacon lights. The question before us is, are we helping junior high school students explore the world of work with involvement and hands-on experiences which enable them to answer the question, "Is this for me, and am I for it?"

Is vocational education built upon a model of exploration and experimentation obsolete? The answer is "No!" It is more pertinent today when students ask the question, "Who am I, and what am I good for?" No person in our society can answer the question intelligently unless he or she can answer the question: "How am I going to participate and contribute to the well being of my fellow man?" One has to have skills to contribute and to belong; and if one doesn't belong, he will become a burden rather than an asset to society. We can make the decisions to let vocational education wither away; but for the well being of our society, we have an obligation to analyze the role which such preparation means to every human being and to adapt our programs accordingly.

Mahatma Ghandi had a powerful educational perspective. He called it The 3 H's: head, heart, and hand. It is a powerful educational philosophy because it tells what we, as human beings, really are about. These are not isolated, little parts of us, but unified and integrated into that which enables us to be the kind of people who can deal effectively with ourselves and our environment.

(2) How should we perceive vocational education? I think we should perceive vocational education as educational first and vocational second. I think that we should perceive vocational education as a part of the life cycle, the life activity of

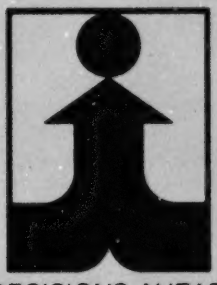
every human being. The problem is for education to assist every human being so that he finds how vocationally or avocationally he can gain his fulfillment as a human being. If we really did our job, youth would come out of our schools and be able to make a transfer between the vocational and the avocational in ways that would be truly actualizing to them throughout their lives. Vocational education should be conceived as an opportunity to help children explore life roles, to show them how they can participate effectively in the real life of the community, and to help them to discover what kinds of activities they can engage in from which they can derive satisfactions of living.

(3) For whom is vocational education provided? All students should be required to experience some vocational education in order to explore the career opportunities available to them. What is fundamental? That is a primary question that you and I have to answer. We still interpret what's fundamental in school in terms of the *quadrivium* and the *trivium* of medieval times, instead of what is real and significant for a child growing to maturity in a complex society.

(4) My last issue is that we have to decide how to educate children. We live in a rich, educative environment which children want to be a part of—and we tell them to wait until they are older. But that life of the whole community is what really intrigues them! We put real kids from a real community into an unreal situation, and we wonder why they become bored and indifferent. The real world for the child involves living and working in the community, learning while working in the community, experimenting and exploring. We can improve all education by using community activities for their educational values—but this is particularly true for vocational education, which is a field that relates to the major activities which comprise the community.

Our greatest challenge is the decision on how we will build the curriculum of the future. We have the structure of knowledge approach; we have the social functions approach; and we have the discrete subject-matter disciplinary approach. We maintain these approaches in spite of an educational philosophy which says we should start with the learner and prescribe a program appropriate to his needs. Educators have to decide if our approach is to be standardized or individualized, if we are educating in general or human beings specifically.

You who are vocational educators can give leadership to building a program of studies on the most unique basis that has ever been conceived in American education. You can look upon every child as a unique creature and design an individual program of studies for him with the purpose of helping him become a participating, contributing, fulfilled human being in our society. No other field has as rich an opportunity to show the way, and I hope we rise to this challenge.



DECISIONS AHEAD IN TEACHER EDUCATION

Carl J. Dolce

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Introduction

In the past, decisions affecting schooling, education, and teacher education have actually been made without significant influence by the professional educator. In fact, a strong case can be made that all significant changes in education have been the result of decisions and issue resolutions concluded outside the ranks of the professional educator. A de facto decision not to decide on the part of the educational establishment at this time will not prevent decision making by society. De facto decisions not to decide represent a willingness to accept decisions which are made by other forces and other voices. Now it is not clear at this time whether the professional educator, in general, or the vocational teacher educator, in particular, has actually decided to try to influence the future course of events or whether vocational teacher education will drift wherever the currents might lead. What is clear is that change is in the making and that such change will occur with or without

the participation of the professional educator. The most ambitious among us can hope only to influence the direction of change.

This discussion is based upon a series of propositions which will not be fully developed. These propositions are listed to make explicit the framework of the discussion.

Proposition Number 1: Basic changes are occurring in the society in which we live.

Proposition Number 2: These societal changes will provide the decision premises concerning education and schooling.

Proposition Number 3: Decisions about schooling and education will, in turn, direct future developments in vocational-technical education.

Proposition Number 4: The nature of schooling and education will provide the framework for decisions about teacher education which will, in turn, delimit and direct developments in vocational teacher education.

If these propositions are valid, then teacher educators, of which vocational teacher educators are a subpart, operate within the larger framework which circumscribes and establishes the decision premises which underlie any decisions about teacher education. If these propositions are correct, it is also true that exclusive attention to teacher education, without regard for societal directions and decisions about schooling, misses the mark in terms of the basic decision which will actually be made.

Those concerned with teacher education and who confine their analyses to such matters as techniques of instruction, course development, and organization of the curriculum, act upon the false premise that decisions about such matters can be made in isolation. They ignore the framework and foundation upon which such particulars rest, and they ignore the insights of such thinkers as Plato and Dewey — that education and the education of teachers are shaped by the ideals of society and the forces operating within that society.

Those knowledgable about the history of vocational and technical education understand quite well the relationships between the system of production in the middle ages and the master-apprentice mode of education, the needs of an emerging industrial society and Germany's technical schools, the similar relationships which existed in the United States, and the Smith-Hughes Act of 1917. What seems to be less clear to too many is the relationship between the rapid growth of sales and distribution occupations and the George Dean Act of 1936, the concern for the disadvantaged and minority groups, the Vocational Education Act of 1963, and the Amendments of 1968. Intelligent decisions concerning teacher education are dependent on understanding the directions and concerns of society. The educational process itself and the consequent education of the teachers are reflective of the resolution of basic social, economic, and political issues at a particular time. However, an understanding of the directions and concerns of society is, in itself, not sufficient. Such understanding points to general directions and to the limits of decisions. The particulars of decisions depend upon translation of basic directions into more specific mechanisms. In most eras there is latitude for a variety of alternative mechanisms.

Education and Society

Assumptions which are made affect the conclusions reached. The educator can make one of at least two assumptions about the relationships between education and society. The first assumption is that educational mechanisms and processes are effects and that the task of the educator is to understand the directions of society and adapt to those directions.

The second assumption, which is an alternative to the first, is that educational mechanisms and processes are effects which, in turn, become interactive with basic societal forces and over a period of time affect the future directions of society.

Whereas Dewey accepted the second set of assumptions, vocational education, in my judgment, has tended to reflect the first; that is, vocational education, and its historic development, has tended to accept the status quo and has geared its programs to what was perceived to be existing directions. The very concept of task analysis and course construction is based on such an assumption; that is, define the tasks and train for those tasks. The questions of what the tasks should be or whether the tasks should be performed at all are too seldom raised.

Vocational teacher education is inevitably faced with the basic questions faced by society. Vocational teacher education is also faced with questions about the substantive nature of vocational education itself in order to insure that the substantive directions of vocational education are within the constraints of society. One lesson of history is that institutions, which no longer are reflective and which no longer have utility, die. Decisions will be reached in teacher education, and in vocational education itself, whether or not it is assumed that education can be and will be a dynamic variable in itself, interacting with societal forces and, in turn, influencing these forces. If such an assumption is made, vocational education will move nearer the constraints imposed by society. However, such an assumption, if valid, will also add initiative and greater leverage to the field.

Whether reflective or interactive, there is evidence that vocational education, as reinforced by vocational teacher education, has tended to represent the past rather than the present or the future. Within the largely favorable Russell Committee Report of 1938, the narrowness of vocational education at that time was pointed out. This theme was played in another key in the Report by the National Commission appointed by President Kennedy in 1961, which criticized vocational education for failing to address itself to the needs of large segments of the population and to the trends in the labor market. The Vocational Education Act of 1963 placed legislative sanctions behind those concerns. Eleven years later, vocational education is still trying to play "catch up"; and vocational teacher education has been of little assistance in its actual practices. One interpretation, which might be given to the career education movement, is that such a movement represents another attempt to increase the inclusiveness and to broaden the concerns of vocational education. It is, of course, possible that these are simply rumblings in the distance which will soon fade into muteness. If the rumblings do fade, then reactions would have been considered premature. However, if the rumblings do not fade and actually increase with too little responsiveness on the part of the establishment, then either or both of the following will probably occur: alternative mechanisms will be developed, or externally coerced upheavals will occur in the establishment itself to induce the needed changes.

Responsibility

As goes vocational education, so goes vocational teacher education. Hence, vocational teacher education must address itself in a serious way to the substance of vocational education and its future directions. The substance of vocational education is rooted in the basic societal directions, which are changing, and the subsequent decision premises concerning education and schooling.

The nature of vocational and technical education is only one facet affecting vocational teacher education. A second facet is suggested by the proposition that vocational teacher education is the subset of the larger domain of teacher education. In other words, decisions about teacher education in general will affect decisions about vocational teacher education. There is evidence that the future of teacher education itself is very uncertain. The very premises of the status quo of teacher education are being questioned.

Serious questions are being raised about whether teacher education should remain the function of the universities. It is no longer startling to read serious proposals that responsibility for teacher education be transferred to the public school system. Frank Ross makes this proposal quite seriously in his article, "Let's Get Teacher Training Out of Teacher Training Institutions."[1] Articles proposing such changes are becoming more and more frequent. James Tyson and Mary Ann Carroll raise equally seriously the question, "Will schools of education survive?"[2] It is quite possible that, in the future, teacher education will no longer be a function of the universities. This key decision is one which will be made in the political arena and not in the halls of schools of education or universities. If you think that such an alternative is too far fetched, you should be reminded of the relative recency of the development of teacher education as a function of the universities and that in several nations today, teacher education utilizes far different mechanisms than those which are utilized in the United States. For example, in the People's Republic of China, "...teaching establishments are linked to production units, and training annexes are set up to serve production centers."[3]

Control

The control of entry into the profession by means of certification also is displaying a tendency to pass from the direct influence of the teacher educator to other quarters. The NEA has developed a Model Teachers Standards and Licensure Act which specifies the appointment of a commission to establish certification requirements, which would study and accredit teacher education programs. This

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[1] Frank Ross, "Let's Get Teacher Training Out of Teacher Training Institutions," *English Education*, Volume 5, Number 3, February/March 1974, pp. 145-151.

[2] James C. Tyson and Mary Ann Carroll, "Will Schools of Education Survive?" *The Journal of Teacher Education*, Volume 23, Number 4, Winter 1974, pp. 438-441.

[3] William Grossin, "Educational Strategies for Building New Societies," *Intellect*, Volume 101, Number 2348, March, 1973, pp. 395-396.

model act provides for a commission composed of seven teachers, two supervisors or administrators, only two higher education faculty, one specialist, and one assistant.[4] Evidence that this model act is not a matter of idle speculation is the introduction of a bill based on the model act in the 1974 session of the North Carolina General Assembly. Thus far I have outlined within the context of teacher education two decision points, questions concerning responsibility for education, and questions concerning control of entry into the profession.

Government Influence

A third decision point is the nature of teacher education programs themselves. There's a greater and greater tendency for state legislatures and state departments to mandate the type of teacher education programs that will exist. In New York State, the State Department of Education mandated that all future teacher education proposals and revisions will be in terms of observable competencies and not in terms of college courses. In California, the Teacher Preparation and Licensing Law of 1970, called the Ryan Act, removed review of teacher education programs from the jurisdiction of the Department of Education and created a new agency, the Commission for Teacher Preparation and Licensing. This act allegedly has "shaken up" teacher education in California.[5] In Texas, the State Department of Education mandated Competency-Based Teacher Education, which, in the view of one opponent,"...hit Texas's campuses with an impact like the bombing of Pearl Harbor...."[6] Several state legislatures are readying legislation which would mandate competency-based teacher education.

Funds

I think that what we are seeing here in the rumblings of society and political entities is that the status quo in teacher education is not satisfactory. Even the existing resources allocated to teacher education programs are being subjected to increasing review. The trend on the federal level seems to be toward a reduction of professional development funds.

A few years ago, the federal government deliberately sought to bypass colleges of education in research and development efforts by the creation of regional educational laboratories. It is clear that the federal government trend is toward changing the traditional pattern of funding for vocational education. In several states there is evidence of a state-wide review of duplicating teacher education programs; and in terms of vocational education itself, on a state level, state departments of education and state boards of education are critically rethinking whether or not vocational education should be funded by state contract funds.

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[4]Mora Mathieson, "What Do They Mean by Parity?" *The Journal of Teacher Education*, *op. cit.*, pp. 500-507.

[5]William G. Stryker, "Teacher Preparation Under California's Ryan Act," *English Education*, Volume 5, Number 3, February/March 1974, pp. 165-170.

[6]Ellis Sandoz, "CBTE: The Nays of Texas," *Phi Delta Kappan*, Volume 55, Number 5, January 1974, pp. 304-306.

In one state, North Carolina, the amount of state support for individual vocational teacher education programs has been steadily reduced over the last few years. It is ironic that such moves to reduce or to eliminate state support comes at a time when most universities are unable to assume a significantly greater financial responsibility.

The evidence points, in my judgment, toward a growing distrust of teacher education and teacher educators. The evidence also points to serious attempts to change radically the process of teacher education and the control of that process. In other words, there are indications that teacher education as an institution is perceived as not meeting the needs of society; and alternatives are currently being fashioned.

Many of those concerned with teacher education appear to be complacent. Those who seem to be complacent are engaged in a process of denial of the inadequacies of the status quo. Despite these denials of inadequacies, the inadequacies of the status quo are all too apparent. Such inadequacies are the result, in part, of the actions of teacher educators who have served as the gatekeepers to those certified to teach and administer the schools. Rather than serving as a model of effective and efficient education in themselves, too many teacher education institutions have practiced the rhetoric of individualized instruction in classes where all students are instructed in an identical manner. They have also exhorted students to utilize a variety of instructional techniques while exclusively relying upon lectures and have preached the importance of motivation in dull, uninteresting classes.

Competency-Based Approach

Some parts of the educational establishment have attempted to respond to the criticism of teacher education. One such response is the attempt to develop competency-based programs. The primary focus of the competency-based approach is upon the output of teacher education programs; that is, focus on the capabilities of those who complete such programs. Much discussion has been devoted to the problems inherent in the development of exit criteria.

Serious conceptual problems remain unresolved. For example, it is not clear whether the totality of the end product can be described eventually in behavioral terms, whether some facets of the end product can be described in behavioral terms, whether some characteristics of the end product can be described in behavioral terms and some in general competency statements, or whether the essential characteristics can be described only in general competency terms. It does appear that there is not the capability at this time to describe the end product only in behavioral terms and with any degree of valid specifications. Another problem area which faces resolution is that of evaluation of the end product—how does one evaluate effectiveness?

There is a second characteristic of the competency-based approach and that is movement toward a programmatic approach in teacher education in which the parts of the program are identified and the relationships among those parts specified. Most of the traditional programs are not programs at all. Rather, they are curriculums which have only the most premature of theoretical frameworks and which are

composed of an aggregate of isolated courses, the relationships among which are simply taken for granted.

In those states which are moving toward mandatory competency-based programs at this time, there exists a case of too much too soon. It remains to be determined whether there is sufficient educational technology and adequate theoretical formulation to enable the full development of this attempted response to the mounting criticisms of teacher education.[7]

There appear to be few, if any, alternatives which will have consequences of any magnitude available to the teacher educator. Teacher educators can only hope to indirectly influence the future course of events.

Decision Making

Teacher education, of which vocational teacher education is the subsystem, is itself a subsystem of larger subsystems: that is, colleges and universities, public school systems, regional, national, social, economic, and political systems. Effective future decisions concerning teacher education can only be made within the framework of the larger systems. For example, there is the higher probability that resource allocation constraints on universities will inevitably affect resource allocations for teacher education. Political decisions about control of certification procedures will also affect decisions about teacher education. In short, decisions about teacher education will not be made as they have not been made in the past — exclusively by teacher educators.

If direct alternatives and consequences of large magnitude are not available to the teacher educator, what types of decisions are possible? In my judgment, the first set of decisions revolves around attempts to develop a more adequate definition of the nature and function of vocational education. There is a serious question in my mind as to whether there is such an entity known as "vocational education." Those who appear to fall into the classification of vocational education tend to identify themselves as Agriculture Education, Trade and Industrial, Distributive Education, Business Education, Home Economics, and so forth. The commonalities are ill-defined, and there is no one set of concepts which is widely accepted. At times in some quarters, "vocational education," "occupational education," and "career education" are used interchangeably. At times, in other quarters, they are used as separate constructs. In few cases are specifications and boundaries made explicit. The one unifying force seems to have been federal funding legislation. With the addition of more and more fields into the funding legislation, even this apparent commonality seems to be disintegrating.

The first set of decisions, in my judgment, involves developing a self identity, if such is possible, of the vocational educator. This first set of decisions is rooted in a second set of decisions which revolves around the definition of the role and function of vocational education in our society. Such a definition requires the development of a theoretical framework and a valid conceptual base for vocational education. The raw empiricism of vocational education has tended to produce responses to an

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[7]For a brief discussion of the precedents of CBTE see Herbert M. Kliebard, "The Question in Teacher Education," *New Perspectives in Teacher Education*, Donald J. McCarty, et al., Jossey-Bass (San Francisco: 1973) pp. 8-24.

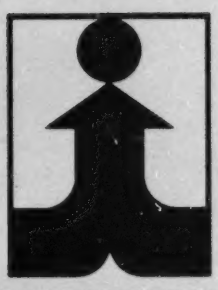
unexamined image of what society is, without coming to grips with the value questions which are being raised by forces outside of the educational establishment. The role and function of schooling and education and the specific role and function of vocational education are the substantive questions which are involved in this area. Geographic mobility of the population, economic opportunity and mobility, successive choices of differing career patterns, the status of women, minorities, and the handicapped are among the elements to be addressed.

A third set of decisions points to the development of a translation of the substantive nature of vocational education in the schools into a substantive base of the university curriculum. The substantive nature of vocational education is as much the teaching field of the vocational educator as is the substantive nature of English to the teacher of English. Exclusive emphasis upon teaching processes without concern for the teaching field provides little justification for the role of the vocational teacher educator.

A fourth set of decisions is closely intertwined with the decisions facing teacher education in general. Unless the process of educating teachers is made more effective and efficient, there is a high probability that the mechanisms currently used for teacher education will be radically altered. Perhaps such should be the case. However, such development would be regrettable if it takes place simply because of society's dissatisfaction with the existing mechanisms. In such situations, the tendency seems to be to develop alternatives which are not necessarily rationally considered and which might not be as satisfactory as the alternative which is being replaced.

The teacher educator is faced with the problem of regaining respect and faith in his efforts. Perhaps competency-based education is an answer; perhaps it is not. Nonetheless, continuance of the status quo, in my judgment, will become less and less tenable. The vocational teacher educator is faced with a series of decisions, some of which are particularistic, some of which are universal. The problem of self-identity of the vocational educator, the problem of defining the substantive nature of the field and the function of that field in society, the problem of translating the substantive nature of the field into the teacher education programs, and the set of problems faced by teacher education, in general, all represent unstable situations in which historical balances have been upset and in which there will be new resolutions. The vocational educator is faced with the basic decision concerning what part he or she will attempt to play in the inevitably newly-forming patterns of stability.

This discussion has sought to avoid the plight of the futurist, who more often than not is proved wrong in the predictions made. Implicit in this discussion is an acceptance of the premise of alternative futures, any one of which might develop, depending upon the types and natures of decisions which are made. This discussion has attempted to present a set of propositions which, if valid, provide a glimpse of the range of decisions which will determine which of the alternative futures will develop. Whether or not educators will have any influence upon the future which will develop is dependent, in part, upon the skill in identifying decision points, the sensitivity in defining issues, and the wisdom in proposing resolution of those issues. A basic question is whether or not the educator will decide to try to have some influence on the future course of events.



LEGISLATIVE DECISIONS WHICH MUST BE MADE

George Wallrodt

National Advisory Council on
Vocational Education

Review Hearings

Vocational education will be high on the agenda of Congress during the next 12 to 18 months. Federal funding for vocational education and extension of vocational programs will be the major concerns. As you know, the Vocational Education Act expires in June of 1975, although the programs will continue for one additional year under a provision of law which allows automatic extension of expiring educational programs. Both the U. S. Senate and the U. S. House of Representatives plan to hold oversight hearings on vocational education before drafting new vocational education legislation. These hearings in Washington will be a thorough and comprehensive review of vocational programs around the country to determine the effectiveness of the Vocational Education Amendments of 1968 to see how they can be improved. The House Education and Labor Committee will kick off the hearings next week in Raleigh, N. C.

In preparation for these hearings, the National Advisory Council has worked closely with the State Advisory Councils on Vocational Education for the past six months in preparing an analysis of the impact of the 1968 Amendments. Each State Advisory Council has prepared a report on vocational programs in its state over the past five years. These reports have been summarized by the National Advisory Council and submitted to the House Education and Labor Committee and to the Senate Labor and Public Welfare Committee.

Report Findings

I would like to review some of the findings of these reports. One of the questions contained in the outline and questionnaire upon which the reports were based had to do with the need and effectiveness of State Plans for vocational education. The State Councils unanimously endorsed the principle embodied in the present law that each state should submit a plan setting forth how vocational education funds were going to be used, but the Councils voiced several criticisms of the way State Plans are now handled and suggested some directions for improvement.

Ideally, the State Plan forces state officials to analyze needs, establish priorities, and allocate scarce resources; but in some states the planning process has tended to bog down in formality. Concentration on meeting the literal requirements of the law results in failure to fulfill its spirit. The State Plan too often becomes merely a compliance document to satisfy USOE requirements rather than a viable planning document. It is submitted and then forgotten. It does not become an effective tool for guiding performance.

Among the suggestions for improving this situation were calls for injection of greater flexibility in the regulations that define how the State Plans are to be designed. It was proposed that the states should be given broad latitude in devising their plans; but once formulated, the plans should be monitored to insure that they are actually implemented.

Recent legislation, such as the Education Amendments of 1972 which authorize the creation of state 1202 planning commissions, indicated the interest in Congress for effective statewide planning of education programs. It is highly probable that new vocational education, when written, will provide for more effective planning procedures for vocational education.

Another major issue to be considered by the Congressional committees is that of consolidation of vocational education programs. The Administration has requested that the various parts of the Vocational Education Act be consolidated into one-block grants. The U.S. Office of Education is presently working on proposed legislation to effect consolidation. The National Advisory Council is studying the matter but has not yet reached a decision on whether some or all of the various parts under the Vocational Education Act can be combined into one grant.

The State Advisory Councils in their reports generally agreed that the delineation by Congress of specific categories has been effective in attaining the overall objectives of the law. While many expressed a desire for flexibility and elimination of red tape, they felt that many vocational education needs would not have been faced and dealt with had there not been specific categories. Without the

categories, many states would have followed the path of least resistance and simply continued their existing programs, adequate or not. In many cases, the categories gave states the incentive needed to investigate new approaches and undertake new or revised programs.

Most State Councils agreed that some degree of consolidation could be accomplished, but none favored total consolidation without some qualification. Most reports stated that Federal priorities must be identified and maintained. Some of the suggestions for consolidation were combining Part C (research) and D (exemplary programs), putting together the vocational education section of EPDA with Part I (curriculum development), and the combining of Part G (cooperative education) and Part H (work/study). A number of the State Council reports recommended that Part B, Title X of the Higher Education Act dealing with post-secondary occupational education, be made part of the new Vocational Education Act.

Disadvantaged and Handicapped

Another issue in which Congress will be interested is the matter of set-asides for the disadvantaged and handicapped and whether they should be eliminated or perhaps increased. A majority of the State Councils reports that set-asides for the disadvantaged and handicapped should be retained in any new legislation, at least at the present levels of 10 and 15 percent. They urged that better regulations be drawn to define those in need and how best to reach them.

Sex Discrimination

The Congressional committees intend to look very closely at the problem of sex discrimination in vocational education. This is an issue which is totally ignored by most vocational education administrators and teachers but which will soon have to be contended with. The Office of Civil Rights in the Department of Health, Education and Welfare is presently working on regulations to enforce Title IX of the Education Amendments of 1972, which prohibits sex discrimination. This law applies specifically to vocational schools regarding admissions policies. In writing a new vocational education act, Congress will be looking even more deeply into the problem and will attempt to deal with sex discrimination in individual programs and with the age-old stereotypes which say that some occupations are male and some are female. This could have a profound effect on vocational programs and curriculum planning, not to mention the overall image of vocational education. I personally believe the effect would be beneficial.

EPDA Funding

As I mentioned earlier, it has been suggested that the vocational education section of EPDA be incorporated into the new Vocational Education Act. I believe that the National Advisory Council will definitely support that recommendation when it testifies before the Congressional committees so that there continues to be continuity in the preparation of vocational teachers and administrators. The

President's budget this year contains no funds for EPDA. The same was true last year, but Congress appropriated money for the program over the objections of the Administration. In testifying before the House Appropriations Committee last week, U.S. Office of Education spokesmen said there was no longer a need for EPDA because of the surplus of general education teachers. They conceded that there were other areas of special needs, such as bi-lingual education and education of the handicapped, where EPDA-type programs are still needed; but they contended that those areas are covered in other separate pieces of legislation. The National Advisory Council believes that vocational education is one of those areas of special needs and will probably recommend, when it testifies this spring before the Appropriations Committee of the House and Senate, that funding for EPDA be continued under the current EPDA Act until the vocational education section can be incorporated into a new Vocational Education Act.

Urban Vocational Education

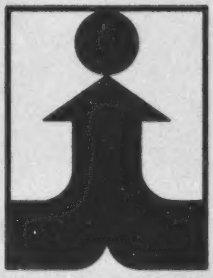
Another area of concern which the National Advisory Council will bring to the attention of the oversight hearings is that of urban vocational education. Over the past year, the National Advisory Council has conducted a series of public hearings in representative urban areas around the country. They have been in Washington, Pittsburgh, Atlanta, and Los Angeles; and the final one will be this week in Houston. We have not yet finished analyzing the results of the hearings, but we do see certain trends which suggest the possible need for special funding for vocational programs in big cities.

Conclusions

Some of the general conclusions which we have drawn from the reports of the State Advisory Councils and which we have transmitted to Congress are as follows:

The Councils believe that the basic concepts embodied in the Vocational Education Amendments of 1968 are as valid today as when they were written. The vocational education system is still growing, and that growth should accelerate as the career education concept catches on. Needs are being met more effectively than they were five years ago, but the unmet needs are still enormous in all areas—in programs to meet the demands for vocational education in teachers, administrators, and counselors. A strong Federal law is still needed. It should encourage the continued growth of vocational education, allow flexibility so that states can best meet the particular needs of their citizens and, at the same time, retain some provisions to assure that Federal priorities, such as the needs of the disadvantaged and handicapped, are met.

The legislative decisions which will be made during the next year will affect the strength and quality of vocational education for many years to come.



DECISIONS AHEAD IN CAREER EDUCATION

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Introduction

I would like to make a prefacing comment, if I may, to help place career education in perspective. Back in the early days of this country, some of the original inhabitants of the East Coast were watching a strange-looking building being constructed on a piece of land out over the Atlantic Ocean. One of the individuals, an Indian chief, asked one of the workmen, who could communicate with him in his

native tongue, what the building was going to be. He said it was to be a lighthouse. The Indian chief inquired as to the function of the lighthouse and its purpose. It was suggested that he ought to come back after it was completed and see how it actually functioned. He did come back; and after he had watched it for a while, he made a rather interesting and classic observation. "Light flashes, bell rings, horn blows, but the fog keeps coming in all the same." Career education may be a bit like that. I think we need to be very attentive to more than simply flashing lights, ringing bells, and blowing horns.

As I thought of the topic for tonight, "Decisions Ahead in Career Education," it seemed to me that it might be useful for us to quickly trace through some of the derivatives or foundations from which career education has developed and, from that, draw some of the decisions that confront us and the program.

Some Foundations for Career Education

Career education represents a response to a call for educational reform. This call has arisen from a variety of sources. each of which has voiced dissatisfaction with American education as it currently exists. These sources include students, parents, the business industry, labor, community, out-of-school youth and adults, minorities, the disadvantaged, and the general public. While their specific concerns vary, all seem to agree that American education is in need of major reform at all levels. Career education is one of several possible responses that is being given to this call.

Career education seeks to correct criticisms of American education which hold direct implications for decisions ahead: too many persons leaving our educational system are deficient in the basic academic skills required for adaptability in today's rapidly changing society; too many students fail to see meaningful relationships between what they are being asked to learn at school and what they will do when they leave the educational system. This is true of both those who remain to graduate and those who drop out of the educational system. American education, as currently structured, best meets the educational needs of that minority of persons who will someday become college graduates. It has not given equal emphasis to meeting the educational needs of that vast majority of students who will never be college graduates. American education has not kept pace with the rapidity of change in the post-industrial occupational society. As a result, both over-educated and under-educated workers are present in large numbers. Both the boredom of the over-educated worker and the frustration of the under-educated worker have contributed to the growing presence of worker alienation in the total occupational society. Too many persons leave our education system, both the secondary and collegiate levels, unequipped with the vocational skills, the self-understanding and career decision-making skills, and especially the desire to work that is essential for making a successful transition from school to work.

The growing need for and presence of women in the work force has been inadequately reflected in educational and career options. The growing needs for continuing and recurring education on the part of adults are not being adequately met by our current system of public education. Insufficient attention has been given

to existing learning opportunities outside of the structure of formal education. These opportunities are increasingly needed by both youth and adults in our society. The general public, including parents and the business-industry-labor community, has not been given an adequate role in the formulation of educational policies. American education, as currently structured, does not adequately meet the needs of minorities, nor of economically disadvantaged persons in our society. Post high school education has given insufficient emphasis to educational programs at the sub-baccalaureate degree level.

It is both important and proper that these criticisms be answered, in part, through pointing to the significant accomplishments of American education. Growth in both the quality and the quantity of American education must be used as a perspective to answer the critics. Such a perspective, of course, is not in itself an answer. The answer given to such criticisms must take the form of either refuting the criticisms themselves or of constructing educational changes designed to alleviate those conditions being criticized. The prospects of refuting those criticisms to the satisfaction of the general public seems slight. Thus, an action program of educational reform appears to be needed. Career education represents such a program. It is in the close inspection of the rationale for, a definition of, and some basic concept assumptions concerning career education that we can discover the decisions that lie ahead for career education.

A Rationale for Career Education

Each of the criticisms that we just discussed centers on relationships between education and lifestyles of individuals. Any comprehensive program of educational reform designed to answer such criticisms must be based on some common element inherent in each of the criticisms. Such a common element must be one that can logically be expected to be related to the needs of all persons involved in education.

One such element, which would seem appropriate to use, is the concept of work, defined as conscious effort aimed at producing benefits for oneself and/or for others. This concept is one that can be related to the societal uses of education in all segments of society on the part of all individuals. Work, as we are using it here, centers around the basic human need for accomplishment and the broader societal survival need for productivity. As such, it serves as a universal, common answer that can be given to all who ask, "Why should I learn?" The fact that it may represent for a given individual neither the only answer nor necessarily the most important answer to this question is irrelevant to this claim for commonality. It is a concept that can be applied to all persons of all ages in all kinds of educational settings both within and outside formal education. In fact, productive effort is the glue that holds our society together, and the lack of it is the source of many of our problems. It is a concept, which while obviously encompassing economic man, goes beyond this to the broader aspects of productivity in one's total lifestyle. Proposals for educational change, made in response to any one or a combination of the criticisms we have discussed, can all be accommodated through the use of the concept of work. It is this quality that lends credence to career education as a possible vehicle for educational reform.

A Generic Definition of Career Education

As with any education concept, "career education" has been operationally defined in a wide variety of ways. In a generic sense, its definition must obviously be derived from the ways in which the two words, "career" and "education" are defined. "Career" is defined as the totality of work one does in his or her lifetime. "Education" is defined as the totality of experiences through which one learns. Thus, "career education" can be defined generically as the totality of educational experiences through which one learns about work. Work obviously includes unpaid activities as well as paid employment. Education obviously includes far more than just "schooling." Thus, this generic definition of career education is purposely intended to be of a very broad and a very encompassing nature. Career education emphasizes education, as preparation for work, as one of the basic goals for American education. In no way does career education try to say that this should be the only goal for any student or for any educational system.

Basic Concept Assumptions of Career Education

Based on this rationale and generic definition of career education, the career education movement has embraced a number of basic concept assumptions. As I review these assumptions, would each of you ask yourself these questions: Is this assumption valid? Do I accept it? What are the implications for programs as I view them and as I will be working with them? How do we effectively plan, implement, and operate such programs? These are the critical challenges confronting us in career education in the months ahead.

Some of these assumptions include: (1) Since both one's career and one's education extend from pre-school through retirement years, career education must also span the entire life cycle. (2) The concept of productivity is central to the definition of work and so to the entire concept of career education. (3) Since "work" includes unpaid activities as well as paid employment, career education's concerns, in addition to its fine emphasis on paid employment, extend to the work of the student as a learner, to the growing numbers of volunteer workers in our society, to the work of the full-time homemaker, and to the work activities in which one engages as part of leisure and/or recreational time. (4) The cosmopolitan nature of today's society demands that career education embrace a multiplicity of work values, rather than a single work ethic, as a means of helping each individual answer the question, "Why should I work?" (5) Both one's career and one's education are best viewed in a developmental rather than a fragmented sense. (6) Career education is for all persons, the young and the old, the mentally handicapped and the intellectually gifted, the poor and the wealthy, males and females, students in elementary schools and students in the most advanced graduate colleges. (7) The societal objectives of career education are to help all individuals to want to work, to acquire the necessary skills for work, and to engage in work that is satisfying to the individual and beneficial to society. (8) The individualistic goals of career education are to make work possible, meaningful, and satisfying for each individual through his or her lifetime. (9) Protection of the individual's freedom to choose and assistance in making career decisions are of central concern to career education. (10) The

expertise required for implementing career education is to be found in many parts of society and is not limited to those employed in formal education. Taken as a whole, these ten concept assumptions can be viewed as representing a philosophical base for current career education efforts.

Reform Actions

American education cannot be said to have responded to the demands for educational reform by simply endorsing the career education concept. Only when action programs have been initiated can we truly say a response has been made. Several kinds of actions are required if the successful implementation of career education is to be accomplished. Each of these carry implications for the decisions we must make. These actions also require some combination of federal, state, and local resources.

These actions include: (1) in-service education for all educational personnel at all levels of education designed to provide them with the knowledge, understanding, acceptance of, and commitment to the basic concepts, goals, and objectives of career education; (2) in-service education of educational administrators designed to provide them with the knowledge and expertise required for directing and coordinating career education efforts in the educational setting in which they are employed; (3) in-service education of instructional personnel designed to equip them with competencies required for infusing career education strategies entering the total pattern of instructional activities; (4) in-service education of counseling and guidance personnel designed to increase their competencies in career education, counseling, placing, and follow-up; (5) assistance to teacher education programs in changing curricula and instructional programs at both the undergraduate and graduate level, in ways consistent with the goals and objectives of career education; (6) assistance to agencies and organizations engaged in the preparation and assimilation of career education materials; (7) assistance to agencies and organizations engaged in the development of strategies for evaluation of career education methods, materials, and programs; (8) assistance to educational systems enabling them involvement in both the business-labor industry community and the home in career education efforts; (9) support of exemplary career education efforts, including plans for evaluations of such efforts and dissemination of findings and products to other settings; and (10) support for intensive, continuing research efforts designed to produce new knowledge required for increasing the effectiveness of career education programs.

Each of the above represents a high-priority need. It would be difficult to find agreement that one should be stressed over another. This, in itself, is part of our decision complex. Even though these choices should not be made independently, every institution, every school, and every state must sort from among them those which are to be addressed with highest priority, given limited resources.

The actions of students, education personnel, parents, and members of the business-industry-labor community, no matter how well their intentions, cannot bring about educational reform of the magnitude we are considering so long as the basic policies of American education remain unchanged. None of the basic educational

policy changes advocated by career education is either totally new or totally untested. Yet none has, as yet, become common practice in a majority of educational systems. Not one of these changes can or should come quickly. Each will require considerable study, debate, and public acceptance prior to its initiation.

Education Policies Changes

In spite of the obvious difficulties and dangers involved, each of the following basic educational policy changes are championed by the career education movement: (1) substantial increases in the quantity, quality, and variety of vocational education offerings at the secondary school level and of occupational education offerings at the post-secondary level; (2) increases in the number and variety of educational course options available to students with a de-emphasis on the presence of clearly differentiated college preparatory, general education, and vocational education curricula at the secondary school level; (3) the installation of performance evaluation, as an alternative to the strict time requirements imposed by the traditional Carnegie unit, as a means of assessing and certifying educational accomplishments; (4) the installation of systems for granting educational credit for learning that takes place outside the walls of the school; (5) increasing use of non-certified personnel from the business-industry-labor community as educational resource persons in the educational system's total instructional program; (6) the creation of an open entry, open exit educational system that allows students to combine schooling with work in ways that fit their needs and educational motivations; (7) substantial increases in programs of adult and recurrent education as a responsibility of the public school educational system; (8) creation of the year-round public school system that provides multiple points during any twelve-month period in which students will leave the educational system; (9) major overhaul of teacher education programs and graduate programs in education aimed at incorporating career education concepts, skills, and methodology throughout the entire spectrum; (10) substantial increases in the career guidance, counseling, placement, and follow-up functions as parts of American education; (11) substantial increases in program and schedule flexibility that will allow classroom teachers at all levels greater autonomy and freedom to choose educational strategies and devise methods and materials that they determine to be effective in increasing pupil achievement; (12) increased utilization of educational technology for gathering, processing, and disseminating knowledge required in the teacher-learning process; (13) increases in participation in educational policy making on the part of students, parents, and members of our various community groups; and (14) increases in participation, on the part of formal education, in comprehensive community educational and human services efforts.

There are three basic implications inherent in the kinds of educational changes that I have cited, and I think we should make them very explicit. First, while initial implementation of career education programs will be relatively inexpensive, total educational reform is going to be very expensive. No matter how much current education budgets are realigned, there is simply no way this total reform can be carried out with current sums now being expended for the public school and public higher educational systems. Second, a substantial portion of the additional funds

required could be found in current remedial and alternative educational systems which, supported by tax dollars, now exist outside the structure of our public school system and our system of public post-secondary education. Career education represents a movement dedicated to avoiding the creation of a dual system of public education in the United States. A single comprehensive educational system will be both less expensive in the long run and more beneficial in meeting educational needs of all people in our society. Third, the days of educational isolationism are past. It is time that our formal educational system join forces with all of the segments of the total society in both community service agencies and the business-industry-labor community in a comprehensive effort to meet the varied and continuing needs for education on the part of both youth and adults. Rather than either complaining about or competing with other kinds of educational opportunities, all must collaborate and provide appropriate educational opportunities to all of our citizens.

Unless these kinds of long-range educational reforms are made a basic part of the career education strategy, it is unlikely that the kinds of criticism that led to the establishment of career education to begin with will be effectively answered.

As a response to a call for educational reform, career education has operated as a paper priority of American education for the last three years. During this period, it has demonstrated its acceptablity, as a direction for change, to both educators and to the general public. Its widespread application to all of American education has not yet taken place. If successful efforts in this direction can now be made, the result should be complete integration of career education concepts into the total fabric of all American education. The call for education reform, to which career education seeks to respond, is still strong and persistent across the land. That call can no longer be ignored.

In closing, I would like to share with you a recent statement by U.S. Commissioner of Education Dr. John Ottina, concerning OE's response to that call and the decisions the Office of Education is making.

Since the departure of Dr. Marland for greener pastures (the presidency of the College Entrance Examination Board), I have been asked repeatedly, "What will happen to Career Education now? Will the Office of Education keep the momentum going?" People want to know if we will continue to provide the kind of leadership and resources committed under Dr. Marland, first as Commissioner and later as Assistant Secretary; and they deserve to know.

The answer is an unequivocal "yes." Career education is a major priority of the Office of Education, and it will continue to be so. It is a major priority of the National Institute of Education and of the entire administration. True, there are some physical constraints in career education, as in other program areas; but our planning and program people are working closely with their counterparts in NIE to explore every way to get maximum use of available resources, with the hope that these resources will grow considerably in the next year or two. While we were disappointed in not getting the new money we requested for this fiscal year, we should not lose sight of the fact that career education continues to be advanced under a number of legislative authorities including the Cooperative Research Act, the Vocational Education Act, and the Educational Professional Development Act.

The new 1975 HEW budget request of ten million dollars, specifically for career

education, provides for five program objectives which are currently in the planning stages: First, to maintain and further encourage state and local efforts aimed at implementation of career education programs; second, to strengthen career education leadership potential present in state educational agencies; third, to explore and demonstrate means of extending the career education concept in settings where implementation efforts have been largely lacking; fourth, to further refine the conceptualization of career education's effectiveness; and, fifth, to assemble evaluation data resulting from such testing.

I am convinced that the spark ignited by Sid Marland and many of his colleagues, in government and out, is now generating its own momentum in states, colleges and local communities. Career education is going to make it with or without Federal support. The need for a closer relationship between education and the world we live in, as workers, as social beings, and as individuals seeking personal fulfillment, is too clear to too many people to chalk career education up as just another fad.

I am confident there will be Federal support as long as it is needed. I will do everything I can to make that support viable, productive, cost-effective, and, most of all, student-effective. At the beginning of every budget cycle, every planning period, every conference and workshop, we need to remember that we are planning, budgeting, and learning toward a single goal. That goal is to improve the educational product we offer America's 60 million school and college students. Career education, in my view, is now an essential component of that process.

That concludes the statement by Commissioner Ottina. I personally endorse that commitment and pledge my own energies and those of the staff with whom I work to the accomplishment of those tasks.

DECISIONS REGARDING MANPOWER AND EMPLOYMENT

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Models for Decision Making

I had the pleasure of working in Massachusetts with Bill Conroy, who has developed a management information system for occupational education which involves an approach known as dynamic simulation. This is a systems analysis applied to occupational education in which the elements of a decision-making process are seen in terms of *how* to make a decision. The model explains what happens if an additional dollar is spent on occupational education, taking into account a whole host of variables. If you have a conference next year, I hope you will have as a theme, "How Decisions Are Made." I find it inconceivable that one could make any type of decision without explicitly stating what his model is. If the decision is so complex that it cannot be written down, how can we assume that you or I could handle it in our minds? In mathematical terms, we may have 30 variables or 30 simultaneous equations which cannot be worked out in our minds or on a calculator.

However, they can be worked out by a computer. The reason for formulating the model is not so much to achieve perfection but rather to look at the model and say, "How about this variable and that variable?" After you have done that, someone else can look at the model and say, "How about this other variable?" Until we set up some kind of system or some model of the way in which we think about a problem, I don't see how we can make any decisions in vocational-technical education.

Decisions in Vocational-Technical Education

I have been asked to discuss the things you ought to think about in the future when you make decisions about vocational education. More specifically, what are some of the manpower factors you ought to consider in the near future? Unfortunately, I do not have a model for you. I could list many factors, but I would be concerned that you would use them and make mistakes in the decision-making process. All decisions are basically decisions of how resources should be allocated at the present time in order to meet future situations. This decision, or decision-making process, is going to become more and more important as society calls for more money for other social activities. Education, including higher education, will need to tighten its belt and figure out ways to achieve its goals through new processes and new structures at lower relative costs.

From my point of view, this tightening of funds is desirable. For too long, particularly in higher education, we have solved all of our problems by getting more money. Now we are confronted—and I think it is going to be true of vocational education—with having to solve many problems with possibly even less money. A series of questions must be considered. What are these future situations? Can we anticipate them? Do they exist only in the areas of manpower and employment? Do they exist in areas which we can discuss now? Do we have a satisfactory model? If we can anticipate the situation, does vocational education have a significant impact on it? Even if it could have an impact, would we depend on vocational education to do anything about it? Has vocational education been successful in the past? If it has failed, is it because of external factors over which it has no control?

Some of you may recall that the Amendments of 1968 included a paragraph, which was virtually ignored, in which vocational educators were urged to cooperate with the employment service and to exchange information. It seemed to me that this paragraph made certain assumptions. First, it assumed that if you, as vocational educators, did collaborate with the employment service, the employment service would furnish you with satisfactory information. It also operated on another assumption: namely, that if you only knew what society needed in the form of manpower, you could then go back into schools and train people to meet that particular need. In my mind, this is a very simplistic approach to the problem.

Manpower Problems

There are three ways in which we could really look at the relationship between vocational education and manpower.

If we accept the very broad definition of career education, there is no need to

worry about the future of manpower. Instead, we just *educate* youngsters. This approach is consistent, I might add, with that which allows the market to function without interference. I refer to a book, *The Market for College Graduates*, that was written at Harvard University. The general conclusion of the book is that the market for college graduates tends to adapt reasonably well to changes in manpower requirements. I know you would like to do something to make the market more efficient, but I would warn you that it is possible to interfere and to make the end result worse. That does not mean that letting the market function is the best alternative, but it may be better than interfering with the market. I am not necessarily an advocate of this approach, but it is something that must be considered. As I indicated in one of the small group sessions, we do live under a free enterprise system and must allow the market to function. This is the way in which most segments of our society operate. Let us give it a chance and concentrate on educating youngsters.

Is it the responsibility of our educational system to train young people for jobs? An alternative approach is, of course, to have a totally planned economy. If your goal is to match people with jobs, a controlled economy might work. Lloyd Reynolds of Yale University recently visited the People's Republic of China. He was struck by the fact that very little economics is taught in China. Yet there is no unemployment, people get jobs, consumer goods are plentiful, and the economy seems to be working quite well. As an economist, he raised the question, "Isn't that interesting? Without any economics, the economy seems to be working well."

When any group of people gets together, it has to make economic decisions. People are going to decide first what they want to produce and second how it should be produced. Should we save or spend? We could chop wood, but we do not have food; if we chop wood, we could have a fire. It is very easy for a society to make economic decisions without studying economics, but it will have to study economics when it has tremendous economic growth, such as in the United States, and is confronted with problems of unemployment, inflation, balance of payments, etc.

A third approach is to allow the market to function but also to anticipate certain bottlenecks that may exist in the future and to try to eliminate them. This approach is probably what is being attempted today.

Manpower Forecasting

In the area of manpower forecasting, we have some very serious problems. There has been a variety of approaches to these problems. One approach is to look at the population and to anticipate if someone who was born 18 years ago and is entering the labor market today could graduate from college four years from now and add to the supply of labor in the market. Another approach examines the potential gross national product of the future and tries to translate it in terms of the demand for labor. In other words, from the demand side, how many workers will be needed in various industries?

The trouble with both approaches is that they ignore one element, which is the most important element from an economist's point of view. That element is the price or the wage.

Let me turn to some of the elements in the future manpower situation about which we may be reasonably certain. I would like to recommend to you the 1973

Manpower Report of the President, which has an excellent chapter on the effect on American society of the lower birth rate of the past two years as we move from a three-child family to a two-child family. Of course, once you have a low birth rate, you cannot go back and increase it. If you want to do anything about it, it has to be in the future. You know how many people are born in one year and what the entry into the labor force will be in the future, given some adjustments. As a result of the lower birth rate, we will, in the long run, have a much older group of people. Relatively speaking, we are going to have an aging population. Many of our institutional arrangements — for example, early retirement—run counter to this forecast. If we have fewer and fewer people in the labor force, the gross national product will decline. Thus, we are on a path of early retirement when we foresee in the future large proportions of older people. For once let us try to anticipate the problem rather than solve it after the fact.

Another factor which has developed in recent years is the increase in teenage employment as well as the increase in teenage unemployment. People always refer to the high rate of unemployment among teenagers—35 percent unemployed. At the risk of being misunderstood, I sometimes am amazed, given our educational system, that 65 percent do get jobs. That is not a bad figure given their handicaps.

The marital status is not as significant as the presence of children in the rate of labor force participation. In fact, married women with no children have almost the same labor force participation rate as single women with no children. We can anticipate a rising percentage of women in the labor force.

I recently read an article in which an attempt was made to analyze the question of discrimination against women in jobs. It was found that when women held the identical positions as men in professional jobs, they got the same salaries. The discrimination was that they did not have the opportunity to get into these same jobs. So, in comparing the average rate of pay for women and the average rate of pay for men, statistically we are talking about a different product mix. If you control for the position being held, it is difficult to find men and women in a large firm doing the same work but at different rates of pay. The role of research is to clarify the area of discrimination.

With respect to the dynamics of women in the labor force, vocational education has not handled the job particularly well. Many women enter the labor force when they are married, stay in the labor force for a while, have children, withdraw, and return to work when the children grow up. I don't know to what extent vocational education or educational institutions can adapt to the dynamics of this process.

Another point I would like to touch on concerns minority groups. We have a situation in which supply creates its own demand, and that is why jobs have higher educational requirements. The reason jobs might require higher education is not that the higher education is needed but rather that there is a supply of people with higher education. The extent to which we keep raising educational requirements, even when unnecessary, might be a basis on which there would be discrimination against blacks in the long run. In fact, the discrimination is in the differentials in educational level rather than discrimination in employment.

I have become interested in the whole issue of the quality of work life and changing attitudes toward work. I think I heard a misstatement yesterday about worker power, which was used synonymously with trade union power. I would like to

distinguish between these two terms. Actually, the facts reveal that although absolute trade union membership has risen in recent years, the percentage of the labor force in unions has decreased to about 26 percent. At one time, it was as high as 35 percent. Increasingly, workers are interested in participating in on-the-job decisions which affect their lives. I think we are going to see an increasing emphasis here. Many young people—who might even be members of a union—are just as much against the union establishment as they are against the management establishment. To what extent does vocational education recognize these changing attitudes toward work and try to adapt its educational program and process accordingly?

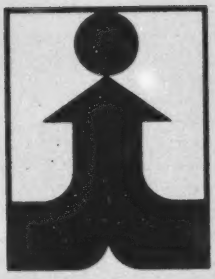
For example, we do train youngsters in vocational education in a highly structured way. When they enter the work force, they may go into a plant in which some job control exists in the sense that the workers may participate in decision-making processes concerning their jobs. We really have not trained students to perform in that situation or in any other kind of situation. If workers are going to make much larger decisions about their jobs (I am not discussing worker participation in management; I am talking about worker participation in decisions concerning their jobs), they must learn how to do it; and they are not going to learn how to do it, it seems to me, in a highly structured educational system. They should be involved in decision making in our educational system and not just be told what to do.

Let me use another illustration. I attended a conference one time at which I heard an explanation of an occurrence in one General Motors plant. A typical group of workers was taken, virtually at random, from an assembly line and was told to put an automobile together. They had to read the blueprints and handle all the tools themselves. It took approximately five weeks for five or six people to put the car together. At the end of a certain period of time, these same people were able to put the car together in the amount of time it took to go through the assembly line. The people in the group went home with blueprints, came in early, and learned how to work with one another disciplining the one who was not performing satisfactorily. Did they learn in school how to discipline themselves and work with their fellow students? Certainly, if workers are going to have more to say about their jobs, the educational system should respond by teaching decision-making processes in the school. It should be noted, however, that the converse may take place: vocational education may adapt to the change in young people by teaching such interpersonal skills while industry remains highly structured. In this case, a totally different set of problems will occur.

I am also concerned when I see two numbers: The United States has 6 percent of the population and consumes 35 percent of the energy in the world. This situation is not going to continue. We are going to be faced with a redistribution of the standard of living in the United Sates as compared with other countries. To what extent does our educational system contribute to an understanding of this kind of problem, which has many manpower implications?

Another point is the acceptance of higher levels of unemployment: legitimately, we do accept them today as a national standard. Finally, though, there are many other problems. I would like to suggest the implications, with respect to manpower and education, of a society in which we think high levels of inflation will

continue. What are the implications for manpower? What I am really suggesting is that the next time you have a conference, get somebody who can take some of these variables, put them into a system so you can analyze them, and then hopefully try to get some data to determine the validity of that particular model.



DECISIONS ON VOCATIONAL EDUCATION FOR WOMEN

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Many women are outgrowing their traditional place in society. Whether responding to personal needs and ambitions or to changing socioeconomic conditions, women are seeking new roles, interests, and opportunities in the world outside the home.

Women in the Labor Force

Since the industrial revolution, millions of women have left home to work in factories, offices, hospitals, and classrooms. Yet, women continue to be neglected and underestimated in the work place where most are restricted to low-paying, subordinate positions affording few opportunities for advancement.

Today, nine out of ten women will be employed at some time during their lives. Many can expect to spend at least 25 years in the labor force. Unfortunately, the millions of women who are currently employed receive 60 percent of men's earnings.

Women who are single, divorced, widowed, or married to a low-wage earner must work primarily for economic reasons. Today, over 15 million of the 33 million women in the labor force are the sole supports of their households. Moreover, one third of female-headed families live below the poverty level, including those families headed by full-time, year-round working women.

Societal Restraints

Unless society recognizes that women, too, are breadwinners and unless women receive equal pay for equal work and are prepared to enter traditionally male occupations offering higher wages, there will be growing numbers of families on welfare. Unless society responds to the need of working mothers for adequate child care, then half of the population will have to pay for the "better half" to stay home.

Whether women work at home or at jobs, they constitute a convenient source of cheap labor. Women are valued for selflessness and service and are rewarded largely by moral commendation. A system which exacts loyalty, sacrifice, and hard work in exchange for charitable praise commits women to a state of psychological and economic dependency. Women who choose careers over marriage or accept the dual roles and responsibilities of homemaker and wage earner experience token independence, equality, and freedom.

At a time when women are entering business and industry at the rate of a half million a year, workers have become critical of management principles and production methods, a disenchantment that is symptomized by high absenteeism and acts of sabotage. Industrialization and the progress it has created have become mixed blessings.

Many workers spend their waking hours on jobs that bear little relation to their personal lives, jobs where their best efforts are expendable, monotonous jobs where they have lost control over the production process. Work no longer provides many people with personal satisfaction and meaning. Instead, leisure activities seem to provide genuine enjoyment; but as hard as some people work during their leisure hours, hobbies and crafts, painting, puttering, or playing with the kids are not considered real work. Industrialization has led to alienation and a widening gap between the concepts of work and pleasure.

Economic Impact

Economist Paul Samuelson of M.I.T. predicts that as women enter the labor force in greater numbers, our standard of living will increase by at least 10 to 15 percent; that is, greater utilization of women's potential will increase productivity, consumerism, and the national income—results that should benefit male workers as well. The elimination of discrimination should increase not only economic opportunities for women but also should improve our social status. In addition, increased opportunities for women should support the trend toward smaller families and zero population growth.

John Galbraith has pointed out recently that the increase of women in the labor force will contribute to the marked growth of services. He contends that as women

abandon their traditional roles, small businesses will take over the tasks formerly performed by women in the home. Thus, shifts in economic patterns will be congruent with changes in the social foundation, the family.

Once equality of the sexes is achieved, what more can we hope for besides an improved GNP and a stable population? While women are entitled to economic and social equality, work as many have known it has the power to dull human sensitivity and spiritual development.

Unless the social and economic system and our values and priorities change, women and men will continue to be defined and judged by the work they do; and their identities and worth will be measured, superficially, according to their earnings. There will be rich and poor and those who cannot or choose not to compete in the labor market—those who care for the children will retain a lower status.

Priority Shift

The demand for equal rights and the eradication of conventional sex roles represent a vital social force. Many observers contend that as women gain greater opportunities, they will introduce into the larger society more humanitarian ideals. Women's changing role is relevant not only to our socioeconomic system but also to our future priorities and values.

In a world where we must learn to cooperate or perish, to respect nature and our resources or suffer ecological disaster, the needs for quality in our lives and delicacy in human relationships become imperative to survival; and inner spiritual growth must be symbolized in the society as a whole.

In fact, there is already a shift in priorities which reflects changing social values, widespread discontent with our current system, and growing political and social consciousness, of which the women's movement is a by-product. These priorities are also mirrored in the change from an industrial to a technological, service-based economy.

Increased technology will create a wide variety of new and emerging occupations. Rapid changes in the labor market will create demands for new skills and quickly render old skills obsolete. As a result, people will not only change their jobs but also their occupations. In fact, they may have to seek retraining several times during their working lives in order to adapt to shifting economic conditions.

Automation will free workers from repetitive, mechanized labor and should erase the division that now exists between work and leisure. It is anticipated that with increased automation, society will place a premium on intellect. Knowledge may well become our greatest commodity, and the ability to grasp overwhelming amounts of available information will become a vital skill. In a world that will grow increasingly interdependent, a world largely operated by machines, men and women will depend on their gifts of mental facility and adaptability. In a service-based economy, people will be valued for their personalities, sensitivity, emotional responsiveness, and individual experience. In addition, "The new society may reward self-expression through interaction with nature, through social interchange...Creative self-

expression may become important for vocational utilization as well as for aesthetic purposes."[1]

Consequently, education will have to adapt to changing values and priorities as well as to rapidly changing occupational demands. New curricula ought to emphasize instruction in broad concepts as well as techniques for problem-solving, to focus on personal and social development, and to develop flexibility as a basic survival tool. Competence in communications, in information retrieval, and in relating to others, as well as to nature and the man-made environment, may also be regarded as tools for survival. Many citizens today fear cybernetics and the dominance of the machine. In the future, men and women must be prepared to manage and maintain moral control over the science and technology that serve them.

Flexibility Needed

In short, schools will have to prepare youth for continuing education and employment as well as a variety of life roles and leisure time. In preparing students for future careers, the educational system must become more flexible in order to adapt curricula and training programs more quickly to changing labor market demands. Because cooperative relations with foreign countries may lead inevitably to the establishment of a mobile international labor force, educators will have to respond to employer demands, not only in the United States but also throughout the world.

The values of the emerging society will necessitate cooperation among all social institutions for the public good. Vocational educators ought to initiate more flexible relations with the academic community in order to provide students with broader educational alternatives. Educators must also establish an improved rapport with business and industry, a sector that must begin to act out of social concern.

Changes in women's roles imply need for changes in educational policy and programs. Our schools have always responded to the changing needs of society. In fact, education has increasingly become the means of elevating citizens to higher levels of status and participation.

Conclusions

Because education is central to the socialization process, it reflects prevalent attitudes and conventions. Schools, then, tend to reinforce traditional sex roles by counseling and preparing young women for female stereotyped jobs rather than for executive, administrative, or professional careers.

If the schools are to play the major role in preparing all citizens for a fulfilling future, vocational educators would be well advised to examine the structural

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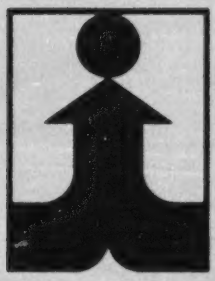
[1]Edmund W. Gordon, "Broadening the Concept of Career Education," *Essays on Career Education*, ed. Larry McClure and Carolyn Buan, Northwest Regional Educational Laboratory, Portland, Oregon.

changes emerging in the labor force, to analyze societal problems and needs, and to structure non-stereotyped educational programs which accommodate men and women on an equal par. In addition, educators must develop flexible programs and services to meet women's individual needs for adult and continuing education, provide non-biased career guidance, prepare and recruit women into top administrative positions, and develop curricula and methods designed to encourage decision-making and improve the self-concepts of young women. In short, the schools must help women to assume a prominent place in society. To undereducate, underestimate, undervalue more than half the nation's population is tantamount to committing social, political, and economic suicide.



DEVELOPING DECISION-MAKERS THROUGH E.P.D.A.

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A Brief Historical Background of E.P.D.A.
Part F, Section 552

A continually increasing concern on the part of Congress and other interested parties across the nation regarding the relative dearth of top-level leaders in the field of vocational education was a major factor in the enactment of the leadership development legislation. The Training and Development Program for Vocational Education Personnel Development was enacted on October 16, 1968, under Public Law 90-576, Title II, Section 201. Title II was later amended to be administered under Public Law 90-35, Education Profession Development Act (E.P.D.A.) as Part F, Sections 551 through 554.

The legislative authority for Vocational Education Leadership Development is in Section 552 of Part F. As stated in Section 552: "It is the purpose of this part to

provide opportunities for experienced vocational educators to spend full-time in advanced studies of vocational education for a period not to exceed three years in length." Section 552 (a) further states: "In order to meet the needs in all the States for qualified vocational education personnel such as administrators, supervisors, teacher educators, researchers, and instructors in vocational education programs, the Commissioner shall make available leadership development awards in accordance with the provisions of this part only upon determination that ...." The Act then continues to describe the eligibility requirements of the applicants.

Leadership Defined

One of the activities completed by the Leadership Training Institute (LTI) was the development of a *Review and Synthesis of Leadership Training*. This document attempted to identify some of the key aspects of leadership in order to define the word "leader" as it pertains to this program. The publication included a review of the literature pertinent to key leadership development characteristics. The report concluded that Freeman and Taylor's definition of leadership, "the ability to create group action toward an organizational objective, with maximum effectiveness and cooperation from each individual," was most appropriate. I, for one, concurred with this definition; and to this day, we do not have any one definition that applies to this program.

Leadership Positions in Education

What are considered leadership positions in the field of education? In my personal view, I consider the following positions as leadership roles in accordance with the above-mentioned definition:

1. Principals
2. Area school directors
3. Deans of two- and four-year institutions
4. Department heads
5. Supervisors of research
6. Education consultants
7. Teacher educators
8. National, state, and local administrators/supervisors
9. Administrators of proprietary, penal, and other educational institutions
10. Members of advisory panels
11. Officers of national, state, and local educational organizations
12. State and local superintendents
13. Presidents of colleges and universities

This list may seem rather extensive to some of you; some of you would no doubt add others or modify some of these. I cite these leadership positions because people in these types of positions are normally the "they" in the autonomous structure, particularly when the question is asked, "Who said so?" In other words, it is people such as these who normally are required and/or have the opportunity to demonstrate "the ability to create group action toward an organizational objective, with maximum effectiveness and cooperation from each individual" in the real world educational settings.

More and more educators in positions such as those listed are finding themselves faced with highly-demanding, never-ending, decision-making tasks. The broad managerial or administrative functions of these leadership positions in general are:

1. Organizing
2. Planning
3. Directing/operating
4. Coordinating
5. Controlling/evaluating
6. Purchasing
7. Budgeting/finance

Permeating each of these broad functions is the decision-making process. In my opinion, if the institutions involved in leadership development were not to teach anything else in their program, they should at least make the students aware of the stages in the decision-making process. Simply stated, they are:

1. Determine the problem.
2. Collect the data and facts.
3. Analyze the details or factors of the problem.
4. Identify the resources required for the problem.
5. Develop the procedure to resolve the problem.
6. Develop and weigh alternative courses of action.
7. Finalize your course of action.
8. Evaluate and follow-up.

If students were given an opportunity to develop their abilities, these abilities combined with the core of theory they receive from their other courses would enhance the ability of the graduates to function as effective leaders in their future endeavors.

Highlights of the Leadership Development Program

Let me cite some of my personal observations as I moved across the nation monitoring the various projects within your institutions. In general, at practically all the institutions, the structure of the doctoral curriculum consisted of these five program offerings which made up the formal program of studies: (1) several core courses and elective courses; (2) internships (between one and four), in various lengths; (3) seminars or tutorials; (4) field trips; and, (5) dissertation. Awardees were permitted to take and did take courses in other departments within and outside the School of Education.

Core Courses—In general, the core course offerings were: history and philosophy of vocational education; three or six hours in research; three to six hours in statistics; and six to twelve hours in the major field of studies, such as administration, curriculum, and the like.

Internships—During the course of this program, EPDA awardees were involved in full-time internship in a variety of locations and types of organizations, such as:

- Educational laboratories
- Research coordinating units
- Technical institutions
- Area vocational schools
- Teacher-education programs within and outside the institutions
- State departments
- State advisory boards
- College accrediting associations
- Private consulting firms
- AVA headquarters
- U.S. Office of Education
- Educational-planning councils
- Curriculum laboratories
- Penal institutions
- Peace Corps in Africa

Seminars and Tutorials—The seminars were scheduled weekly or bi-weekly. The basic goals of the seminars or tutorials were to provide staff and awardees with the opportunity to explore and to develop a wide range of decision-making and leadership skills. The range of activities within these seminars were many and varied. They consisted of: developing advocacy or policy papers and inviting guest speakers to present such topics as School Law, Public Relations in Vocational Education, Career Education, Accountability, the Legislative Process, Economics, Research Design, and others. Among the nationally recognized speakers at these seminars or tutorials were Sidney Marland, Frank Riesman, Roman Pucinski, and Kenneth Hoyt. The seminars were also used as open forums to encourage free exchange of ideas.

Field Trips—Field trips or visitations were made to businesses, industries, schools of all levels, curriculum laboratories, Research Coordinating Units, and State Departments of Education.

Volunteer Activities—In addition to formal professional activities and contributions, many awardees volunteered their services for the following types of activities:

- Volunteer counseling for parolees
- United Community Chest volunteers
- Little League coaching
- Teaching at day care centers
- Working with Boy Scout troops
- Advisor to senior high school church fellowships
- Volunteer vocational counselor for delinquents
- Working with minority groups

Campus Activities—many campuses involved leadership roles in such activities as:

- Student representative on the faculty council
- Officer of the graduate education club
- Officer of campus Phi Delta Kappa Association
- Publishing brochures and flyers
- Publishing newsletters
- Publishing national quarterly EPDA newsletter
- Making arrangements for and organizing conferences and workshops such as this one
- Serving as moderators, chairpersons, and recorders in workshops and conferences
- Developing questionnaires to evaluate workshops

Local, Regional, State, and National Conferences—Participated/Organized

Awardees helped to organize and participated in such conferences as:

- National EPDA conference at AVA
- Regional EPDA conference consisting of five or six institutions
- Joint conferences among EPDA institutions
- AACTE conference
- State AVA conference
- Regional "Women in the World of Work" conferences
- Specific discipline conferences

All these activities that I have just mentioned to you, as you can readily see, are activities which enhance and give realistic practice in the decision-making process.

The Near Future—Its Implications

While the near future holds its implications for all of us, it holds special concerns for the vocational decision makers. Some of these concerns are:

- **Metric system**—With the conversion to the metric system at hand, how do we develop competence in the instructor and sufficient instructional material to meet the demand?

- **Accountability**—Once a stylish word; now a must.

- **Energy crisis**—What effect will this have on educational schedules and living and work patterns of the nation?

- **Rapid changes in technology**—Rapid change in technology brings with it need for rapid change in activities. What can we do to develop ability to accept and to adjust to rapid change?

• **Career education**—How can career education be implemented at all levels? What should be the role of the vocational educator in implementation?

•**Women and minority groups**—How can women and minority groups be brought into the mainstream of the work force? What can vocational educators do to speed up this process?

• **Handicapped and disadvantaged**—After years of talk, what progress have we made in bringing the handicapped and disadvantaged into the mainstream of education and employment? What can be done to make this complete?

• **Adult education**—Are the present institutional and non-institutional adult education programs sufficiently comprehensive and flexible to meet current and projected needs for retraining and upgrading associated with our continual technological advancements and changes in our post-industrial society?

• **Population**—What effect will the leveling off of school-age population have on vocational education?

• **Occupations**—How alert are we to new and emerging occupations and the skills required in these? How, in fact, can we tool up to train; and what effort can we make to educate parents, students, and the public about these occupations?

• **Community**—What use can we make of the community and its resources as learning laboratories? What would be the liaison function? Can learning take place in the home? How would evaluation be handled?

These implications are presently upon us, and those leaders in the field and the potential leaders in the "pipeline" must be prepared to address themselves to these implications in the very near future.

Products of the Program

There is a clear indication that the leadership program is meeting or exceeding expectations of training leaders for the field of vocational education. As of the latter part of November, 1973, 110 of the original awardees have been placed in leadership positions. Such positions are:

- Deans of junior colleges
- Executive directors of state advisory councils
- Assistant and associate professors
- State and local supervisors of discipline areas
- Educational personnel coordinators in state departments
- Area vocational school directors

- Assistant directors of RCU's
- Department chairpersons
- Directors of curriculum laboratories

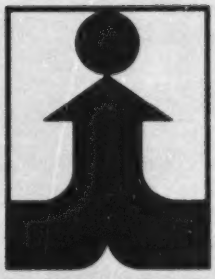
These are some of the positions graduates of this program now hold, which indicates the flavor of the positions for which we are now training these awardees.

Conclusions

As impressive and almost overwhelming as this range of positions seems to be, can we afford to become complacent or lessen our efforts in this aspect of graduate studies? When we live in a world so characterized by technological changes and fluctuating economic trends as ours, students must be educated for adaptability and versatility in meeting changes. In the past, changes have been relatively slow to occur; but today most major changes take place within a decade. Jobs become obsolescent, and we must keep in mind that the jobs which the present-day school population will be filling have not yet been created.

With present concerns and crises here at hand and with the future only a day or so away, it seems clear that some type of structured leadership development program(s) must be maintained and supported to assist your individual institutional efforts to train decision makers capable of meeting the increasingly complex leadership roles in vocational education.

Perhaps I can best sum up the necessity for a concentrated effort in leadership development by quoting a statement from Marion B. Folsom, former Secretary of the Department of Health, Education, and Welfare: "In the final analysis, the effectiveness of any organization is directly dependent upon the caliber of the executives who assume leadership and make the decisions." The basic goal of the leadership development program is to develop those kinds of leaders who can insure this effectiveness.



THE ENERGY CRISIS AND VOCATIONAL-TECHNICAL EDUCATION DECISIONS

Lloyd J. Phipps

Chairman, Vocational-Technical Education
University of Illinois, Urbana

Introduction

Vocational and technical educators and others are asking

1. Do we have an energy problem?

2. How serious is the problem if it exists?

3. What will be the short-range and the long-range effects of the energy problem for vocational and technical education?

We need to recognize that our present society and culture is based on the affluent use of energy. Energy has been used to multiply man's capability to produce. We, in the United States, multiply our ability to produce by 50 to 60 times by the

generous use of energy, use one-third of all the energy supplied, and use energy both productively and wastefully. Since energy has been relatively inexpensive in the past, we have developed to a considerable extent a conspicuous consumption society—a "throw away" society.

Much of our need for vocational education and for technical education has evolved from our very successful harnessing of energy to multiply our capacity to produce.

Energy Limitations

It is not difficult to understand that a shortage of energy and more expensive energy will produce basic changes in our way of life and in our technology, and all of these changes will necessitate changes in vocational and technical education. Since our life style is so closely integrated with the affluent use of energy, all activities will be affected, and thus, all kinds and types of vocational and technical education will be affected. No area of vocational and technical education will be immune.

We are using energy at a dramatically increasing rate. In the past 40 years, we have used as much coal as was used in the rest of recorded history. In the last 18 years, we have used as much gas as was used in the rest of recorded history. In the last 9 years, we have used as much electricity as in the rest of recorded history; and we have just begun to increase our use of energy worldwide. The use of energy, if it is available, is projected to increase at such a rapid rate that if shown on a chart, the curve line would appear to be reaching the vertical.

Scientists who concern themselves with fossil energy supplies have indicated that the world, at the present rate of use, has a 200-year supply. The problem is that we will not use our supply at the present-use rate, especially in the developing countries of the world. When the increased need for energy is considered, we have only a few decades of fossil energy left.

What about nuclear energy? The supply of nuclear energy is also limited. The total supply of nuclear energy, if used, amounts to approximately 24 percent of the total remaining supply of fossil energy. Therefore, nuclear energy is not inexhaustible; and, if it is used, we still have only a few decades of energy left. The situation is further complicated by the problem of what to do with the waste by-products of nuclear energy, which are radioactive. Also, as we use less pure fossil energy sources, we create many environmental pollution problems.

What is the answer, if there is an answer? Lewis Mumford, the urban planner, believes we are entering another dark age period. A member of one of my graduate classes, a vocational teacher, believes we are approaching hard times, very hard times, for the foreseeable future. One thing appears relatively certain. For some time to come, energy will be increasingly expensive unless we get some major scientific breakthrough.

Future Energy Alternatives

In addition to fossil energy and nuclear energy, we have two other sources of energy that we know about at this time. They are solar energy and fusion energy.

We can collect solar energy through plants, solar collector panels, the harnessing of the wind, and so forth. To do this will be costly, will require much new capitalization, will require considerable time, and will require much new technology. It will take time and solar energy and will probably be expensive for the foreseeable future.

Fusion energy, as I understand it, uses the H-bomb principle. It is an abundant source of energy, but we do not yet have the scientific know-how to use it. My physicist friends tell me that we have not been able to develop a container for the fusion process. The fusion process produces such high temperatures that it melts all containers. Thus, energy from fusion is a possibility if we can stretch our present energy supplies until we can obtain a scientific breakthrough so that we can use fusion energy.

Fusion energy uses the hydrogen from water. Since 70 percent of the earth is covered with water at an average depth of 2 miles, it seems we have an adequate supply of the raw product for fusion energy. It is estimated that the fusion process would supply us with enough energy to last another billion years. If we do develop fusion energy, we would also have our problem solved as to what to do with the waste by-products of nuclear energy production. We could package it up and shoot it into the sun.

The problem is that we may get terribly short of energy before we have a scientific breakthrough for fusion energy production, or we may never be able to use fusion energy.

For my own satisfaction, I have established the fact that we do have an energy crisis; and I have concluded that energy in our lifetime will become progressively more expensive, that our life styles will have to change, and that this will have far-reaching implications for vocational and technical education.

Implications for Vocational Education

Our present society is based on the expectation that energy supplies would be cheap and plentiful. Thus, our vocational and technical education programs are based on the proposition that energy will be cheap and plentiful.

It appears that for the foreseeable future, energy will be progressively more scarce and more expensive. How will this affect vocational and technical education and the decisions we must make about vocational and technical education?

In my opinion, it will not make vocational and technical education any less important and necessary. It may make vocational and technical education much more important and essential. Scarce and expensive energy will necessitate much retooling and the development of new job skills. Many new types of jobs will be created. Many old jobs will be drastically changed. It has been predicted that by 1985, most homes will be equipped with solar collection panels for heating. If this occurs, we will need to educate an army of solar technicians.

We will have to educate and re-educate most of our work force in the conservation of energy and permutations related to the conservation of energy.

I do not have a crystal ball; and I do not believe that we as individuals, or collectively, can visualize what effect a continuing and progressively more severe energy shortage will have on our lives and on vocational and technical education.

We can see the "tip of the iceberg," however, and can develop a mental set that will help us make the new decisions about vocational and technical education that we will be forced to make. In other words, it will not be business as usual.

Implications for Applied Biological and Agricultural Education

The energy crisis has already highlighted the importance of this area of vocational and technical education. More and better vocational education for production agriculture and occupations related thereto will be needed and demanded. Society will probably have to utilize more of its work force in agriculture. This increased work force will have to have vocational and technical education.

Last year, there were three million more gardens than the previous year. This year, the increase in the number of gardens and gardeners may increase even more dramatically. These gardeners will need and demand agricultural education.

Applied biological and agricultural educators will have to offer new courses, and they will have to change the content of present courses.

If commercial nitrogen becomes scarce as a result of the energy problem, as it appears it will, crop rotations and nitrogen fixation by biological means will have to be taught again.

Lack of fuel oil, some believe, will force farmers into minimum tillage farming practices to conserve fuel. This will necessitate the teaching of minimum tillage practices in vocational education. However, lack of fossil-generated insecticides and herbicides may force the abandonment of minimum tillage practices for clean tillage. Thus, the ramifications of the energy problem are difficult to predict. Vocational educators must learn how to and be willing to adapt and to change the content of their courses rapidly.

Implications for Home Economics Education

We have already seen increased interest among the populace in home cooking and home food preparation. According to some of the popular magazines, there is a greatly increased interest in sewing. As one home economics teacher said, "We will have to go back to the teaching of stewing and stitching."

As we are forced to become more "conservative minded," consumer education will become more important.

As with other areas of occupational education, home economics education will become more important to our society; and enrollments will increase.

Implications for Business and Distributive Education

Vocational education for business will have to change because business will change. Sales promotion will be different if commodities are scarce. Salesmen will be needing a different kind of education. Also, with an energy shortage, it may become necessary to conduct more business by telephone. This will mean some adaptation in content of courses for workers in business establishments.

If the energy shortage becomes severe enough, we may even have to prepare typists to use manual typewriters instead of electric typewriters.

Implications for Industrial Education

Some of the present industries will become nonexistent or will employ fewer workers. This will change the demand for certain types of vocational industrial courses. New industries will be started, or certain old industries will become more important; and vocational industrial education will have to gear up to prepare workers for these industries.

For example, it appears that the recycling industries will become more important and will employ more workers. Vocational workers and technicians will need to be prepared for the recycling industries. It appears that vocational workers and technicians will need to be prepared in large numbers for the solar energy industry.

Industrial educators will need to make many decisions and changes in the years ahead as a result of the energy problem.

Implications for Health Occupations Education

The change of our life style and the change in the work that people do will affect the health of people and will affect health care systems.

As a result, new types of health occupations education will be needed.

Health care will be a high priority user of scarce energy, but even it will be affected, and, thus, health occupations education will be affected.

Implications for Cooperative Education

If scarce energy produces a recession, jobs for cooperative students may become scarce. The kinds and types of work stations we can and should have will change.

Implications for Commuter Schools

Lack of oil for transportation may produce severe problems for area vocational schools and technical schools that are basically commuter schools. Their enrollments may drop drastically. They may need dormitories. These will be hard to obtain in an energy-short society.

Some commuter schools are seriously considering an extended-day and short-week approach. Thus, they would operate 16 hours a day for 3 days instead of 8 hours a day for 6 days.

Implications for Teacher Education

Teacher educators will need to help vocational and technical educators prepare for continuing change. Teacher education will probably have to change procedures. More emphasis may need to be placed on in-service education by:

1. Telephone
2. Tapes
3. Radio
4. Television
5. Correspondence courses
6. Combination of above.

Conclusions

It appears that the energy crisis is real and may grow worse before it gets better. It will affect all aspects of vocational and technical education. It will necessitate:

1. New vocational programs
2. New courses
3. New content in existing programs and courses
4. New types of facilities
5. New types of teachers
6. More efficient and effective instruction.

It will necessitate an attitude conducive to continuing, rapid change.

Vocational and technical education will need to adjust to a change from a throw-away economy to a thrift economy, a basic change in values from destructive, conspicuous consumption to constructive selectivity and simplification.

APPENDICES

Appendix A
Conference Program

DECISIONS AHEAD FOR VOCATIONAL-TECHNICAL EDUCATION

APRIL 15, and 16, 1974

Carolyn Brown Memorial University Center
The University of Tennessee
Knoxville, Tennessee

A Conference for Graduate Students, Teacher Educators and Supervisors

Monday, April 15

CHAIRPERSON OF THE DAY—*Sam Whitaker, President, V.T.G.S.A.**

8:30 a.m. *Registration (Room 228)*

9:00 a.m. University Center Auditorium
"Welcome to the University of Tennessee"
Jack E. Reese, Chancellor, University of Tennessee

"The Purpose of the New Decisions Conference"
James D. McComas, Dean of the College of Education, University of Tennessee

"Organization of the Conference"
Sam Whitaker

SESSION CHAIRPERSON—*Betsy Heineman**

9:30 a.m. Keynote Address: "New Decisions for a Changing World"
Keith Goldhammer, Dean, College of Education, Michigan State University

10:15 a.m. Reaction

Panel: *John Coster, Director, National Center for Occupational Education, North Carolina State University*
James B. Hamilton, National Center for Vocational-Technical Education
George L. O'Kelley, Chairman, Department of Vocational-Technical Education, University of Georgia

10:35 a.m. Coffee Break

SESSION CHAIRPERSON—*Sharon Cooper**

11:00 a.m. "Priorities Among Decisions for Vocational-Technical Education"
Small Group Discussions (Always meet in Rooms 222-225, 202-203, 208-209)

11:45 a.m. Lunch (on your own)

SESSION CHAIRPERSON—*Wayne Jones**

1:00 p.m. "Decisions Ahead in Teacher Education"
Carl J. Dolce, Dean, College of Education, North Carolina State

1:45 p.m. "Legislative Decisions Which Must Be Made"
George Wallrodt, National Advisory Council for Vocational Education

2:30 p.m. Coffee Break

SESSION CHAIRPERSON—*Herbert Nicholson**

3:00 p.m. "Who Are the Decision Makers?"
Small Group Discussions

7:00 p.m. BANQUET—Sheraton Campus Inn Dining Room
Toastperson—*Donald Erickson**

"Tennessee is..."—*James Slusher**

Address: "Decisions Ahead in Career Education"
Duane M. Nielsen, Bureau of Educational Personnel Development, U.S.O.E., Washington, D.C.

Tuesday, April 16

CHAIRPERSON OF THE DAY— *Norman W. Park**

9:00 a.m. University Center Auditorium — "Progress of the Conference"
Garry R. Bice, Director of the Tennessee Research Coordinating Unit

SESSION CHAIRPERSON—*Rosetta Reed**

9:15 a.m. — "Decisions Regarding Manpower and Employment"
Jacob J. Kaufman, Director, Institute for Research on Human Resources, Pennsylvania State University

10:00 a.m. — Coffee Break

10:30 a.m. — "Decisions on Vocational Education for Women"
Mary L. Ellis, Director, Technical Education Research Center, Washington, D.C.

SESSION CHAIRPERSON—*Lonnie Bell**

11:15 a.m. — "Involving Organizations in Decision Making"
Small Group Discussions

12:00 noon — Luncheon—UT Center Ballroom

Toastperson—*Anita Webb**

Introduction of E.P.D.A. Guests by States

"Developing Decision-Makers Through E.P.D.A."
Frank L. Perazzoli, Education Specialist, Bureau of Educational Personnel Development, U.S.O.E., Washington, D.C.

SESSION CHAIRPERSON—*Joan Clark**

1:15 p.m. — "The Energy Crisis and Vocational-Technical Education Decisions"
Lloyd J. Phipps, Chairman, Vocational-Technical Education, University of Illinois

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*V.T.G.S.A.-The Vocational-Technical Graduate Student Association, University of Tennessee.

2:00 p.m. Summary—"New Decisions for Vocational-Technical Education"
Panel: *C. Cayce Scarborough (Chairperson), Professor of Adult and Vocational Education, Auburn University*
Carl F. Lamar, Assistant Superintendent, Vocational Education, Kentucky State Department of Education
Ben Nash, Southeast E.P.D.A. Division Chairperson, University of Georgia

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SOUTHERN REGIONAL EPDA MEETING is to be held Tuesday, April 16, 1974, 3:30 p.m. at the University of Tennessee University Center immediately following the Conference on Vocational-Technical Education. Chairman for this session will be Mr. Ben Nash, Graduate Student and EPDA recipient at the University of Georgia. Assisting him will be Mr. Norman Park, University of Tennessee graduate student and EPDA fellow.

This conference is sponsored by the Department of Vocational-Technical Education and the Vocational- Technical Graduate Student Association of the University of Tennessee, Knoxville.

Appendix B

DEPARTMENT OF VOCATIONAL-TECHNICAL EDUCATION FACULTY
VOCATIONAL-TECHNICAL GRADUATE STUDENT ASSOCIATION-
VOCATIONAL-TECHNICAL GRADUATE STUDENTS

Department of Vocational-Technical Education Faculty

Dr. Ralph J. Woodin, Professor and Head
Dr. Garry Bice, Associate Professor
Dr. Betty Brown, Assistant Professor
Dr. Ilene Brown, Professor
Dr. Walter Cameron, Associate Professor
Mrs. Pat Campbell, Assistant Professor
Dr. Gerald Cheek, Associate Professor
Dr. Carroll Coakley, Associate Professor
Dr. David Craig, Associate Professor
Dr. Donald Hampton, Assistant Professor
Dr. Roger Haskell, Professor
Mrs. Helen G. Henry, Assistant Professor
Dr. Gerald LaBorde, Assistant Professor
Dr. Nell P. Logan, Professor
Dr. Jacquelyn McInnis, Assistant Professor
Dr. Anthony Porreca, Associate Professor
Dr. Betty Powers, Assistant Professor
Mr. Bill Radcliff, Assistant Professor
Mr. Joe L. Reed, Professor
Dr. Edgar R. Smith, Associate Professor
Dr. John Stallard, Assistant Professor
Dr. Jimmie Thrash, Assistant Professor
Dr. John Todd, Associate Professor
Mr. George Wagoner, Professor
Dr. George Wiegers, Jr., Professor
Nashville Campus-Mr. Terrence Powell, Assistant Professor
Memphis-Mr. Carl McEntire, Assistant Professor

The University of Tennessee, Knoxville
Vocational-Technical Graduate Association
Officers for 1973-74

President-	Sam Whitaker
Vice President-	Norman Park
Secretary-	Betsy Haineman
Treasurer-	Anita Webb
Reporter-	Ruth Richardson
Faculty Advisor-	Dr. Anthony Forreca Vocational-Technical Education Department

1974 Vocational-Technical Education
Conference Committees

Publicity Committee:
Jackie Elliot, Chairman
Ray Clift, Assistant Chairman
Registration Committee:
Joan Clark, Chairwoman
Jeanette Graves, Assistant Chairwoman
Program Committee:
Herbert Nicholson, Chairman
Ruth Richardson, Assistant Chairwoman
Speaker Notification Committee:
Donald Ericksen, Chairman
Lucretia Coleman, Assistant Chairwoman
Convention Facilities Committee:
Rosetta Reed, Chairwoman
Wayne Jones, Assistant Chairman
Hospitality Committee:
Geraldean Johnson, Chairwoman
Sharon Cooper, Assistant Chairwoman

Graduate Students Assisting with the Conference Were:

Marlyne Adams
Mike Ahern
Patra Brawley
Harry Brettschneider
Bonnie Burks
Edna Cole
Paul Dixon
John Freeland
Martha Graves
Margaret Hilton
Jo Nell Jones
Farris Jordan
Buford Manor
Lovella Richardson
Carla Watanabe

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